IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (currently amended): A non-halogenated plastisol composition comprising:

i) ~~A~~ a fine particle of polymer for a plastisol free from halogen atoms and having a specific surface area of 0.6 to 20.0 m^2/g as determined by nitrogen-gas adsorption and an oil absorption rate by linseed oil of 0.8 mL/g or less; and

ii) a plasticizer,

wherein said fine particle is of at least one polymer selected from the group consisting of acrylic polymers, acrylic copolymers, styrene polymers, styrene copolymers, butadiene polymers, butadiene copolymers, vinyl-acetate polymers, vinyl-acetate copolymers and a mixture thereof.

Claim 2 (cancelled).

Claim 3 (cancelled).

Claim 4 (currently amended): The non-halogenated plastisol composition of claim 1 ~~The fine particle of polymer for a plastisol as claimed in Claim 1, 2 or 3~~ wherein the fine particle of polymer has two or more polymer layers having different compositions concentrically from the particle center to its surface.

Claim 5 (currently amended): The non-halogenated plastisol composition of claim 1, wherein said ~~The~~ fine particle of polymer ~~for a plastisol as claimed in any of~~

~~Claims 1 to 4 consisting~~ is in the form of agglomerates formed from a plurality of primary particles wherein the primary particles have an average particle size of at least 500 nm.

Claim 6 (currently amended): A process for manufacturing ~~the~~ a non-halogenated plastisol composition ~~fine particle of polymer for a plastisol as claimed in Claim 5,~~ comprising the steps of:

preparing an aqueous dispersion of a fine particle of polymer in which primary particles have an average particle size of at least 500 nm; ~~and~~

drying the aqueous dispersion at not lower than 50 °C but not higher than ~~[~~a glass-transition temperature of the polymer + 20~~]~~ °C, by spray drying; and

blending with a plasticizer.

Claim 7 (cancelled).

Claim 8 (currently amended): The ~~A~~ non-halogenated plastisol composition ~~comprising the particulate acrylic polymer for a plastisol as claimed in any~~ of Claim ~~5~~ 1, ~~a plasticizer and~~ further comprising an inorganic filler.

Claim 9 (original): The non-halogenated plastisol composition as claimed in Claim 8 wherein viscosity values at shear speeds of 10000 sec^{-1} and 0.42 sec^{-1} are 0.1 to 1.0 Pa·s (25 °C) and 100 to 1000 Pa·s (25 °C), respectively.

Claim 10 (original): The non-halogenated plastisol composition as claimed in Claim 9 wherein the inorganic filler essentially consists of inorganic fillers with an

average particle size of less than 2.0 μm (C1) and of 2.0 μm or more (C2) and a component ratio of these inorganic fillers (C1) to (C2) (by weight) is 30/70 to 70/30.

Claim 11 (currently amended): The non-halogenated plastisol composition ~~as claimed in any~~ of ~~Claims 7 to 10~~ claim 1, wherein the plasticizer comprises a phthalic acid diester of an aliphatic alcohol having 7 to 10 carbon atoms in at least 50 wt%.

Claim 12 (cancelled).

Claim 13 (cancelled).

Claim 14 (cancelled).

Claim 15 (cancelled).

Claim 16 (currently amended): An article produced using the plastisol composition as claimed in any of Claims ~~7~~ 8 to 11.

Claim 17 (new): The non-halogenated plastisol composition of claim 1, wherein said polymer is an acrylic polymer.

Claim 18 (new): The non-halogenated plastisol composition of claim 1, wherein said polymer is at least one copolymer selected from the group consisting of styrene-

butadiene copolymer, acrylonitrile-butadiene copolymers and acryl-vinyl acetate copolymers.

Claim 19 (new): A method of coating comprising applying the non-halogenated plastisol composition of claim 1; and curing.

Claim 20 (new): A method of sealing comprising applying the non-halogenated plastisol composition of claim 1; and curing.

Claim 21 (new): A method of undercoating an automobile comprising applying the non-halogenated plastisol composition of claim 1 to a surface of an automobile; and curing.

Claim 22 (new): The method of coating of claim 19, wherein said curing is by heating.

Claim 23 (new): The method of sealing of claim 20, wherein said curing is by heating.

SUPPORT FOR THE AMENDMENT

Support for the amendment to Claim 1 is found in Claims 2, 3, 8 as well as page 19, lines 1-5 of the specification. Support for the amendment to Claim 6 is found on page 37, lines 13-15 of the specification. Support for Claim 17 is found in Claim 8 as originally presented. Support for Claim 18 is found on page 19, lines 3-5 of the specification. Support for Claims 19-21 is found in Claims 12-15 as originally presented and on page 2, line 10 of the specification. Support for Claims 22 and 23 is found on page 41, lines 5-16 of the specification.

Support for the amendment to the paragraph beginning on page 40 is found on page 40, lines 20-21 which identifies the test conditions as one week. Support for the amendment to the paragraph beginning on page 41 is found on page 41, line 11, as the use of a No. 2 dumbell shape is described in JIS K-7113. Applicants have corrected a typographical error on page 54, and have properly recited the trade name of the mixed aliphatic acid composition from Kao Corporation. No new matter would be added to this application by entry of this amendment.

Upon entry of this amendment, Claims 1, 4-6, 8-11 and 16-23 will now be active in this application.

REQUEST FOR RECONSIDERATION

The present invention is directed to a non-halogenated plastisol.

The plastisol compositions based on PVC have found wide usage in industrial applications. Processing characteristics for such PVC sols are highly developed. However, general concerns about the environmental hazards resulting from PVC have prompted investigations into sols based on alternative polymer compositions. Acrylic sols while providing a similar appearance to PVC sols have heretofore had quite different processability

and accordingly it has been difficult to use such acrylic sols as a direct replacement in method for processing PVC sols. Accordingly, non-halogenated plastisol compositions with processing properties similar to that of PVC sols are sought.

The present invention addresses the problem of providing a non-halogenated plastisol comprising fine particles of polymer in a plasticizer in which the polymer particles have a identified surface area and oil absorption rate. Applicants have discovered that a plastisol composition based on fine polymer particles having these physical features may provide for a plastisol with processing properties similar to PVC sol, without the environmental concerns of the presence of a halogen atom. Such a plastisol composition is nowhere disclosed or suggested in the cited prior art of record.

The rejection of Claims 1-5 under 35 U.S.C. § 102(e) over EP 894,828 is respectfully traversed.

Applicants note, that EP 894,828 is not available as prior art under 35 U.S.C. § 102(e) since EP 894,828 is not a U.S. patent. Notwithstanding, the present invention is clearly not obvious from the disclosure of EP 894,828 for at least the following reasons.

As stated by the Examiner, EP '828 discloses particles having an oil absorption in the range of 60-200 ml/100 g. Such particles are described in an acrylic resin composition in which non-crosslinked polymer powder is dispersed in an acrylic syrup (see Abstract). As such, the reference fails to disclose or suggest a plastisol composition comprising fine particles of a polymer **and a plasticizer**.

In contrast, the present invention is directed to a non-halogenated plastisol composition comprising fine particles of a polymer and a plasticizer in which the fine particles of polymer are defined by a specific surface area as well as an oil absorption rate. Applicants note, the claims have been amended to recite the properties of specific surface area and oil absorption rate as well as the presence of a plasticizer. As the prior art fails to

disclose or suggest the claimed composition of polymer particle and plasticizer, the present invention is clearly neither anticipated nor obvious from this reference and accordingly the withdrawal of the rejection under 35 U.S.C. § 102(e) is respectfully requested.

The rejection of Claims 1-16 under 35 U.S.C. § 112, first paragraph has been obviated by appropriate amendment.

Applicants have now amended the claims to recite that the polymer particles are particles of particular polymers as recited on page 19 of the specification. In view of Applicants' amendment, withdrawal of this rejection is respectfully requested.

The objection to Claims 4, 5, 7 and 11-16 have been obviated by appropriate amendments.

Applicants have now corrected the dependency of claims 4, 5, 7 and 11-16 to remove any improper multiple dependencies.

Applicants submit that this Application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

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MAIER & NEUSTADT, P.C.
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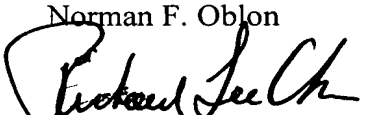

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